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SERIAL NUMBER	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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08/235,279 04/29/94 KIM

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14570MTE EXAMINER

D1M1/0112  
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ART UNIT PAPER NUMBER

5

1101

DATE MAILED: 01/12/95

This is a communication from the examiner in charge of your application.  
COMMISSIONER OF PATENTS AND TRADEMARKS

This application has been examined  Responsive to communication filed on 10/24/94  This action is made final.

A shortened statutory period for response to this action is set to expire 3 month(s), \_\_\_\_\_ days from the date of this letter.  
Failure to respond within the period for response will cause the application to become abandoned. 35 U.S.C. 133

Part I THE FOLLOWING ATTACHMENT(S) ARE PART OF THIS ACTION:

1.  Notice of References Cited by Examiner, PTO-892.
2.  Notice of Draftsman's Patent Drawing Review, PTO-948.
3.  Notice of Art Cited by Applicant, PTO-1449.
4.  Notice of Informal Patent Application, PTO-152.
5.  Information on How to Effect Drawing Changes, PTO-1474..
6.  \_\_\_\_\_

Part II SUMMARY OF ACTION

1.  Claims 1-18 and 21-31 are pending in the application.  
Of the above, claims 1-7 and 23-29 are withdrawn from consideration.
2.  Claims 19 and 20 have been cancelled.
3.  Claims \_\_\_\_\_ are allowed.
4.  Claims 8-18, 21, 22, 30, and 31 are rejected.
5.  Claims \_\_\_\_\_ are objected to.
6.  Claims \_\_\_\_\_ are subject to restriction or election requirement.
7.  This application has been filed with informal drawings under 37 C.F.R. 1.85 which are acceptable for examination purposes.
8.  Formal drawings are required in response to this Office action.
9.  The corrected or substitute drawings have been received on \_\_\_\_\_. Under 37 C.F.R. 1.84 these drawings are  acceptable;  not acceptable (see explanation or Notice of Draftsman's Patent Drawing Review, PTO-948).
10.  The proposed additional or substitute sheet(s) of drawings, filed on \_\_\_\_\_, has (have) been  approved by the examiner;  disapproved by the examiner (see explanation).
11.  The proposed drawing correction, filed \_\_\_\_\_, has been  approved;  disapproved (see explanation).
12.  Acknowledgement is made of the claim for priority under 35 U.S.C. 119. The certified copy has  been received  not been received  been filed in parent application, serial no. \_\_\_\_\_; filed on \_\_\_\_\_.
13.  Since this application appears to be in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11; 453 O.G. 213.
14.  Other

EXAMINER'S ACTION

Art Unit: 1101

1. Applicant's election without traverse of the Group II method claims in Paper No. 4 is acknowledged.
2. Claims 30 and 31 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The amount of Nd in the alloy composition recited in the claims is unclear. The claim states that at least 50 percent of the total rare earth content is Nd, but then goes on to state that up to 50 percent of the Nd may be substituted by Pr and La. Further, in claim 31, other elements may then be substituted for the Pr and La. It is thus unclear how much of the various rare earth elements can or should be present in the alloy.

3. The following is a quotation of 35 U.S.C. § 103 which forms the basis for all obviousness rejections set forth in this Office action:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Subject matter developed by another person, which qualifies as prior art only under subsection (f) or (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

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Evaluations of the level of ordinary skill in the art requires consideration of such factors as various prior art approaches, types of problems encountered in the art, rapidity with which innovations are made, sophistication of technology involved, educational background of those actively working in the field, commercial success, and failure of others.

The "person having ordinary skill" in this art has the capability of understanding the scientific and engineering principles applicable to the claimed invention. The evidence of record including the references and/or the admissions are considered to reasonably reflect this level of skill.

4. Claims 8, 18, 21, 22, 30, and 31 are rejected under 35 U.S.C. § 103 as being unpatentable over Anderson et al., newly cited.

Anderson discloses preparing particles of a magnet material analogous to those recited in the instant claims (see Anderson column 7, lines 1-32), and then exposing the particles to an oxygen and/or carbon containing environment, thus introducing these elements into the particles (see Anderson column 7, lines 38-46). Anderson differs from the present claims in that Anderson does not specify the particular compositions as recited in the instant claims, nor does Anderson specify the final carbon and oxygen contents of the prior art particles. However, these are not seen as patentable distinctions because:

- a) clearly column 7 of Anderson refers generically to the compositions as presently recited, and
- b) as the material being treated and the actual process steps used may be the same in either Anderson or the present

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invention, the examiner holds that the final oxygen and carbon contents would likewise be the same.

Because both Anderson and the present invention are drawn to exposing particles of iron-based magnetic materials to oxygen and carbon containing environments, a *prima facie* case of obviousness is established therebetween.

5. Claims 9-13, 15, and 16 are rejected under 35 U.S.C. § 103 as being unpatentable over Anderson et al. in view of Miyakawa or Kim, previously cited.

The Anderson reference, described *supra*, further indicates that particles prepared by the Anderson method are to be exposed to air, as required by instant claims 15 and 16. As stated on page 6 of the prior Office Action, Miyakawa and Kim disclose the conventionality of subjecting magnetic particles to zinc stearate followed by jet milling. The process of Kim specifically applies these steps to rare earth-iron-boron magnetic particles. Because of this conventionality, one of ordinary skill in the art would have been motivated to apply these steps to any analogous magnetic particulate material, e.g. those produced by the method of Anderson et al.

6. Claim 14 is rejected under 35 U.S.C. § 103 as being unpatentable over Anderson et al., alone or in view of any of Cunningham et al., Dawes et al., or Japan '133, previously cited.

Claim 17 is rejected under 35 U.S.C. § 103 as being

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unpatentable over Anderson et al., alone or in view of Dawes et al., previously cited.

The Anderson reference does not specify that the oxygen containing material is air, as required by instant claim 14, or that the oxygen and carbon containing material is carbon dioxide, as required by instant claim 17. However, the examiner submits that air and carbon dioxide are such well-known oxygen and/or carbon containing materials that their use falls within the generic categories of "oxygen-containing gas" and "carbon-containing gas" of column 7, line 40 of Anderson.

In any event, the secondary references indicate that these gases are commonly used in the art of oxidizing and carburizing iron-based materials; therefore, their use in the process of Anderson would have been an obvious expedient to one of ordinary skill in the art.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to George Wyszomierski whose telephone number is (703) 308-2531.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0661.



GEORGE WYSZOMIERSKI  
PRIMARY EXAMINER  
GROUP 1100

GPW  
January 5, 1995